UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF OHIO
WESTERN DIVISION

JUDY WETHINGTON, et al., Plaintiffs, vs. PURDUE PHARMA L.P., et al., Defendants.	Case No. C-1-01-441 Judge S. Arthur Spiegel

AFFIDAVIT OF GLENN VAN BUSKIRK, Ph.D.

GLENN VAN BUSKIRK, Ph.D., being duly sworn, states and avers as follows:

1. My name is Glenn Van Buskirk. I am over 21 years of age, and am competent in all respects to give the testimony contained herein.

2. I joined Purdue Pharma L.P. ("Purdue") on August 31, 1998. My current title is Vice President, Non-Clinical Drug Development. My responsibilities include oversight of Purdue's Analytical Development department, as well as Pharmaceutics, and Preclinical Pharmaceutics and Analysis. During the time Marek Zakrzewski, Ph.D. ("Zakrzewski"), was employed by Purdue, he worked under my ultimate supervision.

3. I understand that the plaintiffs in this case argue that the claims raised by Zakrzewski in his Third Amended Complaint ("Complaint") in *Zakrzewski v. Purdue Pharma, Inc., et al.* related to OxyContin® Tablets ("OxyContin") are a basis for class certification. I make this affidavit to respond to the substance of Zakrzewski's claims. Except where stated herein, this affidavit is based on my personal knowledge.

4. In his Complaint, Zakrzewski claims that Purdue defectively made OxyContin, which he claims may raise patient safety issues. His claims are incorrect.

5. As an initial matter, none of the tests Zakrzewski is talking about in his Complaint (which simply relate to the unformulated raw material oxycodone hydrochloride) has anything to do with the release rate of oxycodone hydrochloride from OxyContin Tablets. The release of oxycodone hydrochloride from OxyContin Tablets is controlled by a controlled-release matrix, not by the solubility of the oxycodone hydrochloride. This fact alone demonstrates that Zakrzewski's claims have no merit. I discuss in more detail below Zakrzewski's three basic specific scientific claims.

Zakrzewski's First Claim

6. Zakrzewski's first claim is that Purdue in making OxyContin uses different forms of oxycodone hydrochloride ("polymorphs") that dissolve at varying rates, and as a result, the finished tablets purportedly may release drug too fast, and this may raise patient safety issues. That claim is incorrect.

7. First, OxyContin Tablets are formulated as a controlled-release pain medication. The active ingredient in OxyContin is the opioid oxycodone hydrochloride. In this controlled-release formulation, the oxycodone hydrochloride in the finished product is released slowly from a matrix over 12 hours at a rate within the limits established during the clinical development of the medication. These release rates were disclosed in the New Drug Application for the medication ("NDA"), and approved by the Food & Drug Administration ("FDA").

8. The rate of release of the oxycodone hydrochloride from OxyContin does not vary outside of the tightly controlled standards set forth in the FDA-approved NDA.

Since the date Purdue first began to market and sell OxyContin, Purdue has always tested the rate at which the oxycodone hydrochloride is released from OxyContin Tablet batches. Purdue reports these tests to the FDA annually and all data are available for review by the FDA at any time. This testing is conducted at Purdue facilities different from the facility where Zakrzewski worked, and Zakrzewski was not involved in this testing.

9. Second, Zakrzewski's claim regarding the rate at which oxycodone hydrochloride raw material dissolves in laboratory testing has no relevance to how the finished tablets release oxycodone hydrochloride into the body of patients. While Zakrzewski is correct that different forms of oxycodone hydrochloride raw material dissolve at different rates, those differences are merely a matter of a few minutes. And those rates with respect to the raw material oxycodone hydrochloride have nothing to do with the rate of release of oxycodone hydrochloride from within the controlled release matrix of the finished OxyContin Tablet. In addition, the rate of dissolution in a test tube is different from the rate that the dissolved medicine is absorbed in a patient's bloodstream. Zakrzewski's claim that any supposed variation in the dissolution of the raw material oxycodone hydrochloride in laboratory tests raises a patient safety issue is belied by the results of Purdue's clinical studies of the finished product in humans. Purdue studied the ability of OxyContin to manage patients' pain when dosed every 12 hours. Those clinical studies showed that patients maintained acceptable levels of medication in their blood when the medication was dosed every 12 hours, and FDA approved OxyContin for 12 hourly dosing based on those studies.

10. Lastly, even if Zakrzewski's allegation were true (which it is not) that purported variations in the dissolution of raw materials in the laboratory may cause variations in the dissolution rate of finished OxyContin Tablets, such variations would not cause addiction or raise other patient safety issues. According to Zakrzewski, variations in dissolution of oxycodone *may* cause OxyContin to "dissolve more quickly" (which he seems to imply means that the medication will not really work for 12 hours). Based upon well-recognized pharmacokinetic principles, a patient is exposed to no additional risk if a physician makes a determination to prescribe the correct overall daily dose of the medication to be taken in shorter than 12 hour intervals.

11. Further, Zakrzewski's theory of addiction is premised on the assumption that the existence of different oxycodone hydrochloride polymorphs affects the time it takes for the drug to cross the blood-brain barrier. In fact, oxycodone hydrochloride polymorphs can only exist in solid oxycodone hydrochloride; not in dissolved oxycodone hydrochloride. When oxycodone hydrochloride is released from an OxyContin Tablet in the digestive tract, it completely dissolves before entering the blood. Therefore, it is not relevant to talk about different oxycodone hydrochloride polymorphs at the blood-brain barrier because oxycodone hydrochloride polymorphs no longer exist in the blood at the blood-brain barrier.

Zakrzewski's Second Claim

12. Zakrzewski's second claim is that Purdue in making OxyContin uses oxycodone hydrochloride particles of varying sizes, and this may raise patient safety issues. That claim also is incorrect.

13. This claim that oxycodone hydrochloride particles of different size dissolve at different rates is a variation of Zakzewski's first claim that different forms of oxycodone dissolve at different rates. As a result, his second claim fails for the same reasons as his first. With respect to OxyContin, the amount of variation of particle sizes that Zakrzewski alleges cannot affect patient safety. Purdue filed a particle size specification in the original NDA for OxyContin, and Purdue has always tested particle size of the oxycodone raw material to make sure that the particles fall within the specifications. In addition, Purdue's suppliers must also confirm that the raw materials they sell to Purdue meet FDA specifications.

14. Moreover, as discussed above in response to Zakrzewski's first claim, Purdue's tests and clinical studies confirm that the oxycodone hydrochloride releases into the body at an acceptable rate for every batch of tablets. The particle size of the oxycodone hydrochloride in OxyContin Tablets has always been adequately measured and controlled within FDA specifications and simply does not raise a patient safety issue.

Zakrzewski's Third Claim

15. Zakrzewski's third claim is that Purdue uses forms of stearyl alcohol in manufacturing OxyContin that differ in size, shape and form, and these differences may raise patient safety issues. That claim too is incorrect.

16. Any alleged difference in form of stearyl alcohol disappears in the manufacturing process. The form or forms of stearyl alcohol used in the OxyContin production process do not raise a patient safety issue because the manufacturing process involving stearyl alcohol begins with melting the stearyl alcohol. Melting of the stearyl alcohol eliminates any differences in size, shape or form that the stearyl alcohol may

have had prior to melting. Therefore, stearyl alcohol's beginning size, shape or form is irrelevant. Purdue's only reason to monitor the physical form of the stearyl alcohol is as a quality control check.

17. In addition to his scientific claims, Zakrzewski also alleges that Purdue prevented him from reporting alleged patient safety issues to FDA. To my knowledge, that allegation is false. Zakrzewski never told me that he had: (1) ever suggested to anyone at Purdue that Purdue was acting in violation of FDA rules or regulations, or (2) ever told anyone at Purdue that he believed any personnel issues concerning him related in any way to any alleged patient safety issues he purportedly raised.

18. In conclusion, Zakrzewski's allegations that purported laboratory variations in raw materials *may* have caused safety issues for patients taking the finished product are unfounded.

I am competent to make this Affidavit, and the facts contained herein are true and correct to the best of my knowledge.

Dated: December 3, 2003

Glenn Van Buskirk, Ph.D.

STATE OF NEW YORK
COUNTY OF WESTCHESTER

Sworn to and subscribed before me
this 3RD day of December, 2003.

Notary Public
My Commission Expires:

Cherylann Beer
Notary Public, State of New York
Registration #01BE6039278
Qualified In Westchester County
My Commission Expires March 27, 2006